IN THE CLAIMS

Please amend the claims as follows:

1.   (Currently Amended) A cardiac rhythm management system including:

a plurality of electrodes, sized and shaped to be associated with a heart;

a cardiac signal detector circuit, coupled to the electrodes;

an energy output circuit, coupled to at least one of the electrodes; and

a controller, coupled to the cardiac signal detector and the energy output circuit, the
controller including:

an arrhythmia detector module to detect an arrhythmia;

an arrhythmia classifier module, to classify the detected arrhythmia ~~according~~ into
an arrhythmia classification that specifies at least ~~to~~ a sequence in which a heart
contraction depolarization is received by at least three of the electrodes during the
arrhythmia;

a therapy map, providing an antiarrhythmia therapy corresponding to the
arrhythmia classification; and

a control signal to be issued to the energy output circuit to deliver a selected
antiarrhythmia therapy corresponding to an arrhythmia classification.

2. (Original)   The system of claim 1, in which the plurality of electrodes is associated with at
least one ventricle of the heart.

3. (Original)   The system of claim 1, in which the plurality of electrodes includes at least one
electrode associated with a first ventricle of the heart and at least one electrode associated with a
second ventricle of the heart, different from the first ventricle of the heart.

4. (Original)   The system of claim 1, in which the cardiac signal detector includes a
depolarization detector.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.116 – EXPEDITED PROCEDURE
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5. (Original)   The system of claim 1, in which the energy output circuit includes an antitachyarrhythmia pacing circuit.

6. (Original)   The system of claim 1, in which the energy output circuit includes a defibrillation shock circuit.

7. (Original)   The system of claim 1, in which the arrhythmia detector is configured to detect an tachyarrhythmia.

8. (Original)   The system of claim 1, in which the arrhythmia detector is configured to detect a ventricular arrhythmia.

9. (Currently Amended) The system of claim 1, in which the controller sequences through control states to classify the detected arrhythmia into an arrhythmia classification that specifies at least according to:

> the sequence in which the heart contraction depolarization is received at the electrodes; and
> a value of a difference between the times at which the heart contraction depolarization is received by at least two of the electrodes.

10. (Original) The system of claim 1, in which the controller is configured to select the antiarrhythmia therapy corresponding to the arrhythmia classification, including selecting the antiarrhythmia therapy from a list of antiarrhythmia therapies that are mapped to the arrhythmia classification.

11. (Original) The system of claim 10, in which the controller is configured to select the antitachyarrhythmia therapy from the list based on a success estimate.

12. (Original) The system of claim 1, in which the arrhythmia detector is configured to determine whether the delivered antiarrhythmia therapy is successful at treating the arrhythmia.

13. (Original) The system of claim 12, in which the controller is configured to update the success estimate based on whether the delivered antiarrhythmia therapy was successful at treating the arrhythmia.

14. (Original) The system of claim 1, in which the arrhythmia detector is configured to determine whether the delivered antiarrhythmia therapy is successful at treating the arrhythmia, and the controller is configured to escalate to a higher-confidence antiarrhythmia therapy after a predetermined number of failures in treating the detected arrhythmia.

15. (Original) The system of claim 1, in which the arrhythmia classifier classifies the arrhythmia over a plurality of heart contractions.

16. (Original) The system of claim 15, in which the controller delivers a defibrillation shock if a variability in the classification over the plurality of heart contractions exceeds a predetermined value.

17. (Original) The system of claim 1, in which the selected antiarrhythmia therapy includes an antitachyarhythmia pacing (ATP) sequence that sequentially reduces an interelectrode delay between the delivery of ATP pulses at two of the electrodes.

18. (Currently Amended)   A method including:
        detecting an arrhythmia at a plurality of electrodes;
        classifying a detected arrhythmia ~~according~~ into an arrhythmia classification that specifies at least ~~to~~ a sequence in which a heart contraction depolarization is received by at least three of the electrodes during the arrhythmia;

selecting an antiarrhythmia therapy corresponding to an arrhythmia classification of the detected arrhythmia; and

delivering a selected antiarrhythmia therapy by issuing a control signal to the energy output circuit.

19. (Original) The method of claim 18, in which detecting the arrhythmia includes detecting the arrhythmia at a plurality of ventricular electrodes.

20. (Original) The method of claim 19, in which detecting the arrhythmia includes detecting the arrhythmia at an electrode in a first ventricle and at an electrode in a second ventricle.

21. (Currently Amended)   The method of claim 18, in which classifying includes classifying the detected arrhythmia ~~according~~ into an arrhythmia classification that specifies at least ~~to~~ a value of a time difference between reception of the heart contraction depolarization at first and second electrodes.

22. (Original) The method of claim 18, in which the selecting the antiarrhythmia therapy corresponding to the arrhythmia classification includes selecting an antiarrhythmia therapy from a list of antiarrhythmia therapies corresponding to the arrhythmia classification.

23. (Original) The method of claim 22, in which selecting the antiarrhythmia therapy from the list is based on a success estimate associated with each antiarrhythmia therapy on the list.

24. (Original) The method of claim 18, further including determining whether the delivered antiarrhythmia therapy is successful at treating the arrhythmia.

25. (Original) The method of claim 24, further including updating the success estimate based on whether the delivered antiarrhythmia therapy was successful at treating the arrhythmia.

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26. (Original) The method of claim **18**, further including:

determining whether the delivered antiarrhythmia therapy was successful at treating the

arrhythmia; and

escalating to a higher-confidence antiarrhythmia therapy after a predetermined number of

failures in treating the detected arrhythmia.

27. (Original) The method of claim **18**, in which the classifying the arrhythmia is carried out

over a plurality of heart contractions.

28. (Original) The method of claim **27**, further including delivering a defibrillation shock if a

variability in the classification over the plurality of heart contractions exceeds a predetermined

value.

29. (Original) The method of claim **18**, in which the selecting the antiarrhythmia therapy

includes selecting an antitachyarhythmia pacing (ATP) sequence that sequentially reduces an

interelectrode delay between the delivery of ATP pulses at two of the electrodes.

30. (Currently Amended) A cardiac rhythm management system including:

a plurality of electrodes associated with a heart;

a cardiac signal detector circuit, coupled to the electrodes;

an energy output circuit, coupled to at least one of the electrodes; and

a controller, coupled to the cardiac signal detector and the energy output circuit, the

controller including control states, the controller sequencing through control states to provide:

an arrhythmia detector module, configured to detect an arrhythmia and to

determine whether a delivered antiarrhythmia therapy was successful at treating the

arrhythmia;

an arrhythmia classifier module configured to classify the detected arrhythmia

~~according~~ into an arrhythmia classification that specifies at least ~~to~~: (1) a sequence in

which a heart contraction depolarization is received at the electrodes during the detected

arrhythmia, and (2) a time difference value between reception of the heart contraction

depolarization at sequentially adjacent pairs of electrodes during the detected arrhythmia;

a therapy map, providing an antiarrhythmia therapy corresponding to an

arrhythmia classification;

a control signal, issued to the energy output circuit, to deliver a selected

antiarrhythmia therapy corresponding to the arrhythmia classification, the control signal

providing information to instruct the energy output circuit to escalate to deliver a shock if

other therapies fail to succeed at treating the arrhythmia after a predetermined number of

attempts; and

a success estimate for the delivered antiarrhythmia therapy, the success estimate

updated based on whether the delivered antiarrhythmia therapy was successful at treating

the arrhythmia.

31. (Original) The system of claim **30**, in which the controller is configured to deliver a

defibrillation shock if a variability in an arrhythmia classification over a plurality of heart

contractions exceeds a predetermined value.

32. (Original) The system of claim **30**, in which the controller is configured to select an

antiarrhythmia therapy that includes an antitachyarhythmia pacing (ATP) sequence that

sequentially reduces an interelectrode delay between the delivery of ATP pulses at two of the

electrodes.